

## **REMARKS/ARGUMENTS**

Applicant thanks the Examiner for his further review of the present application, and for his comments as provided in the instant Rejection. Applicant imposes on the Examiner to further consider the following remarks submitted in response to the Examiner's comments.

Moreover, in view that this application is now up for its fourth action, the Applicant is respectfully requesting review of the pendency of this application by the Examiner's supervisory Examiner, with a view to concluding prosecution (MPEP 707.02).

### **35 USC §103(a)**

Independent claim 1 remains rejected under §103(a) over the combination of Penn et al. (US 6,169,605) in view of newly cited Jang et al. (US 2002/0062909).

For reasons as previously submitted, Applicant maintains that a *prima facie* case of obviousness has not been properly established with regard to claim 1 and the claims dependent therefrom.

In the text of the §103(a) rejection, the Examiner admits that Penn does not disclose a system configured to simultaneously print at least two layers of different vertical positions within the stack. However, in the paragraph bridging pages 3 and 4 of the Office Action, the Examiner goes on to assert only that Jang discloses a 3D object creation system configured to print at least two layers of different vertical positions within the stack, and to reconfigure a printhead initially configured to print a layer at a first vertical position to print a layer at a second vertical position.

Applicant respectfully points out that the Examiner has not asserted how Jang makes up for the deficiency of Penn regarding simultaneously printing at least two layers of different vertical positions within the stack.

Having again reviewed the disclosure of Jang, Applicant maintains that Jang does not teach or suggest simultaneously printing at least two layers of different vertical positions within the stack. Applicant refers, for example, to Fig. 3 of Jang which illustrates a flow chart of the process used by Jang. According to the flow chart of Fig. 3, a physical layer is formed, consolidated, and treated (see tier labeled "Form physical layers"). Next, it is determined if the layer just formed was the last layer, and if not, the location of the next layer is determined (see tier labeled "Final unification"). Subsequently, the process is repeated from the start to form a further layer (as shown by arrows).

Similarly, the description provided at paragraphs [0114 - 0115] supports Applicant's above view. It is clear from this description that layers are consecutively formed, and not formed simultaneously. Jang therefore clearly does not simultaneously print at least two layers of different vertical positions within the stack.

In view that Penn also does not teach or suggest such a feature, Applicant submits that a *prima facie* case of obviousness against claim 1 has not been established. A combination of Penn and Jang still would not arrive at an invention in which at least two layers of different vertical positions within the stack are simultaneously printed.

Importantly, neither reference provides teaching to simultaneously print at least two layers of different vertical positions within the stack. Even if the printheads of Penn were made reconfigurable to print on different layers, as described by Jang, there is no teaching from either Penn or Jang to have the printheads print to the different vertical layers simultaneously.

In fact, Applicant submits that the Examiner's combination of Penn with Jang is superfluous, because the printheads of Penn are already reconfigurable to print on different vertical layers. In Penn, once a first vertical layer is printed, the two printheads are "reconfigured" to print on a second layer, above the first layer.

The fact remains that both Penn and Jang print layers in consecutive order, and do not print to different layers simultaneously. The description in Jang that the printheads are reconfigurable does not detract from this fact. The teaching of printheads being reconfigurable, and printheads printing to different layers simultaneously, are separate and distinct teachings. One teaching does not necessitate the other.

It remains a fact that, regardless of the capabilities of the printheads, neither Penn nor Jang teach printing to different vertical layers simultaneously. The Examiner is also directed to the guidelines set forth in MPEP 2143.01(VI).

For the above reason, claim 1 is novel and inventive over the combination of Penn and Jang. It follows that claims 2 to 8, 11, 12, and 17 to 22, all dependent from claim 1, are also novel and inventive by virtue of their dependency from claim 1.

Should the Examiner intend to maintain this rejection, the Examiner is respectfully requested to explain how the combination of Penn and Jang is believed to meet the feature of simultaneously printing at least two layers of different vertical positions.

The Examiner's favorable reconsideration of the application in light of the above remarks is respectfully requested.

Applicant further takes this opportunity to respectfully remind the Examiner of the guidelines set forth in MPEP 904.03 regarding the conducting of the search for prior art. It is particularly noted that: *"it is a prerequisite to a speedy and just determination of the issues involved in the examination of an application that a careful and comprehensive search, commensurate with the limitations appearing in the most detailed claims in the case, be made in preparing the first action on the merits so that the second action on the merits can be made final or the application allowed with no further searching other than to update the original search."*

Applicant looks forward to word of further official communication in due course.

Very respectfully,



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